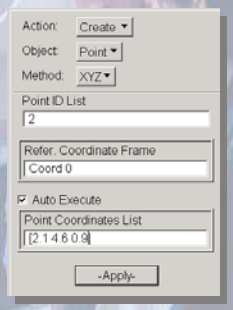
Bending MSC.Patran Sessions Files to Your Will with Unix Scripting

Step 1: When Form Meets Function

```
asm_const_grid_xyz( "1", "[ 2.1,4.6,0.9 ]", "Coord 0", @
asm_create_grid_xyz_created_ids )
```



After hitting Apply in MSC.Patran, Patran Command Language (PCL) is written to a session file in text format. The commands match the forms closely.

Step 2: Bring in the Variables

```
asm_const_grid_xyz( "${ID}", "[${VALUES}]", "Coord 0", @
asm_create_grid_xyz_created_ids )
```

Values can be replaced with variables as in this example of creating point locations.

Step 3: Create Point Locations (Values) in Any Program

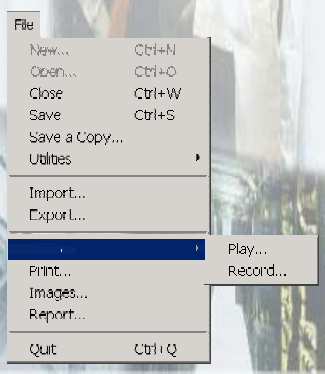
```
ID=1
for ${VALUES} in `cat values.txt`
do
   cat << eof >> locations.ses
   asm_const_grid_xyz( "${ID}", "[${VALUES}]", "Coord 0", @
   asm_create_grid_xyz_created_ids )
   eof
   ID=`expr ${ID} + 1`
done
```

Although Unix Scripting is Used in this example, any programming language can be used to create the session files.

Step 4: Run the Script to Create the location.ses file

Step 5: Play the location.ses File in Patran

After playing session file in MSC.Patran, the Points are created with generally little work from the user. Without too much additional effort, much more complicated problems can easily allow you to "Bend Patran to Your Will"!



Abstract

Unix Scripting, Awk, and Sed are very powerful tools available to most engineers. Unfortunately, most engineers don't realize their capabilities, as Unix based computers have given way to Macintosh and Windows based PC's. This paper demonstrates techniques that allow a user to create very quick modifications to MSC.Patran session files to automate processes.

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